



LOWELL SCHOOL COMMITTEE
Henry J. Mroz Administration Office
155 Merrimack Street
Lowell, Massachusetts 01852

William J. Samaras
Mayor and Chairperson

Jackie Doherty
Vice-Chairperson

Andre P. Descoteaux
Robert J. Hoey Jr.
Dominik Hok Lay
Connie A. Martin
Gerard Nutter

Joint Finance and Transportation
Subcommittee Meeting

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Monday, February 4, 2019
City Hall – Mayor’s Reception Room
6:30 p.m.

Finance Subcommittee Members Present: Chairperson Gerry Nutter, Andy Descoteaux and Dominik Hok Lay

Transportation Subcommittee Members Present: Chairperson Jackie Doherty, Robert Hoey and Gerry Nutter

School Committee Members Present: Connie Martin

School Department Personnel Present: Jeannine Durkin, Acting Superintendent
Billie Jo Turner, Interim Assistant Superintendent for Finance
John Descoteaux, Interim Assistant Business Manager of Transportation

The Subcommittee update is in response to the following motion:

Motion by School Committee Member Gerry Nutter, which was approved at the January 16, 2019, School Committee Meeting:

“A motion to refer report item #8.I. Rezoning the District to Neighborhood Schools to a Finance and Transportation Subcommittee meeting for further discussion and for it to be held next Tuesday, January 22, 2018 in the Mayor’s Reception Room.”

Chairperson Gerry Nutter called the meeting to order at 6:33 p.m. The following agenda items were discussed:

- Rezoning the District to Neighborhood Schools and Transportation

Chairperson Nutter asked Mr. John Descoteaux, Interim Assistant Business Manager of Transportation to address the Subcommittee regarding rezoning the district to neighborhood schools and transportation. Mr. Descoteaux stated that the district tried to work with UMASS Lowell, but due to time constraints it didn't work out. He then introduced Dr. Bertsimas from MIT and asked him to give a presentation to the Subcommittee about his program.

Dr. Bertsimas stated that the plan he proposes to use in Lowell is being used in Boston. In 2017, he presented a proposal to Boston Public Schools on how to transport their students. Presently, Boston has two hundred (200) schools (125 public, 75 charter) and at that time Boston was using six hundred and fifty (650) school buses and the proposal/software package Dr. Bertsimas presented to them brought that number of school buses down to five hundred and thirty (530), however, Boston chose to be more conservative and went with five hundred and ninety-eight (598) school buses, still fifty-two (52) buses less than they were using and Boston Public Schools saw a savings of five (5) million dollars. They're in the 2nd year of implementation. Another proposal he did in Boston was to change start times, something that had not changed in thirty (30) plus years and he stated that this is a national problem. Dr. Bertsimas has contacted seventy (70) or more Superintendent's nationally about start times and stated that start times particularly for high school students need to be later than they are. By changing start times we can have high school student's start later in the day and younger children finish the day earlier. Dr. Bertsimas indicated that the software package would start at the point of student registration and facilitate the choice of schools by grade level, enrollment numbers, gender, racial status, special education status, siblings and other variables that we would like considered for equitable school assignment aligned with the Voluntary Desegregation Consent Decree. The algorithm he uses has originality and creates major savings. He gave the Subcommittee three (3) options:

1. Build an automated system that assigns schools to families, but at the same times deals with the transportation issues.
2. Assigning right families to right school with no changes to start times using the algorithm (the actual software will be given to the district). It's a very sophisticated system and it optimizes the buses and the district will see savings.
3. Change start times and by applying all three (3) levels the district will save over one (1) million dollars which is about 10 percent.

Dr. Bertsimas stated that the district using his program could save \$1,000,000 with the district receiving \$800,000 (80%), and the district doesn't pay anything up front. There is zero risk and if the district sees a savings the company takes twenty (20) percent and the district gets eighty (80) percent for the first (5) years and the district keeps the software. Dr. Bertsimas stated that his company would lose money the first two (2) years and the third (3rd) year would break even with the fourth (4th) and fifth (5th) years seeing a profit. The company will propose solutions to Interim Assistant Business Manager of Transportation Descoteaux for school assignments and buses with no changes in starts times. Dr. Bertsimas stated that his plan if the Committee moved quickly could be ready by May 1st.

Mr. Nutter told Dr. Bertsimas that the district has a voluntary desegregation plan. Dr. Bertsimas said that he will work within the constraints.

Interim Assistant Superintendent Turner asked what if we decided to change bell times. Dr. Bertsimas said there would be a big savings, but the district must educate the public first.

Acting Superintendent Durkin asked if we let the software package place our students, how many students would have to change schools and would it optimize up to the level we want. Dr. Bertsimas stated that his guess would be thirty (30) percent.

Ms. Doherty stated that is disruptive to move children and the forty-five (45) percent that Interim Assistant Business Manager of Transportation Descoteaux had given was astronomical. Can you show us the savings if we went with thirty (30) percent and then fifteen (15) percent.

Dr. Bertsimas said that he can show you ten (10) percent, fifteen (15) percent etc.

He stated that he is not rigid and that his primary objective is to help find a solution with no time change, but the district must change the realignment of buses and the City will see a savings and the level of disruption will be gradual and he can present it in multiple ways.

Interim Assistant Superintendent Turner asked if he can build the algorithm year by year and would there be a significant change in bell times.

Dr. Bertsimas stated that he could, but he doesn't want to over promise because of possible changes like students moving, etc. It's hard to anticipate this and make a proposal and understand the expected benefits.

Chairperson Nutter stated that he hears complaints from parents that live in a neighborhood, but their children get bussed.

Dr. Bertsimas stated that his program will know the identity of students/families so we can put them together.

Chairperson Nutter stated that Dr. Bertsimas mentioned the five (5) main bridges and that the City has another ten (10) bridges over different canals and seven (7) or (8) of those bridges are going to be under construction, with three (3) or four (4) bridges under construction simultaneously.

Dr. Bertsimas stated that he would need to know that and that he needs to know all changes regarding the bridges.

Interim Assistant Business Manager of Transportation Descoteaux stated that he could probably come up with fifteen (15) different scenarios and the most difficult part is the desegregation plan. The minus or plus ten (10) percent of the minority is a very gray area and he believes the Committee wants to keep the voluntary desegregation plan in place so we have two (2) zones and the east zone has to be 26.2 percent non-Hispanic white and that zone has to be sixteen (16) or thirty-six (36) percent, plus or minus that ten (10) percent and although the zone is in compliance the individual schools may not be in compliance, but the zone will be.

Dr. Bertsimas stated that the algorithm can balance your schools and that it needs to be part of the initial assignment and to consider putting a system in place that restricts the level of change. Dr. Bertsimas asked the Subcommittee to believe him when he stated that he knows how to solve this problem.

Mr. Lay asked him when he did this in Boston was the five (5) million dollar savings an actual reality and if he is confident that he can save the district one (1) million dollars a year.

Dr. Bertsimas stated that the figure is a conservative estimate and he believes it is an accurate conservative estimate.

Mr. Hoey stated that he knows of a child that lives on Boylston Street and goes to the Wang School, instead of the Pyne School. He also stated that not all School Committee members feel the same way about this issue. He stated that he is very cautious to move too quickly.

Mr. Descoteaux stated that the start times at the high school are the same as many other high schools and after school activities would be affected because they have to compete against other high schools and he thinks it would be the major problem.

Dr. Bertsimas said even fifteen (15) minutes might be beneficial to the students, but I would have to look at it.

Ms. Martin asked if there would there be any benefit by doing this in a grandfather approach.

Dr. Bertsimas responded that the more levels the more savings and I'll present the facts and you have to be the decision makers. I can't make assumptions for the future, but you have eight thousand (8000) students receiving transportation and I would say ten (10) percent of that number, so there may be a savings with assignments and the bussing and I don't believe it makes any sense to not change the assignment and the buses at the same time.

Interim Assistant Business Manager of Transportation Descoteaux stated he received many calls from parochial schools wanting to know if the parochial schools would still get transportation.

Dr. Bertsimas stated that he will appropriately design the program as told.

Interim Assistant Superintendent Turner asked when he designs this program if the district is allowed to modify the software program yearly.

Dr. Bertsimas stated that Interim Assistant Business Manager of Transportation Descoteaux will have access to this and he will work closely with him.

Ms. Doherty stated that we have challenges and we will need to authorize access to the data. Do we need to enter into a contract and what are you looking for in a commitment from us.

Dr. Bertsimas stated that yes it will be written in a legal way and the district will have a choice every year whether or not to continue to use the program. Again, the company makes twenty (20) percent and you keep eighty (80) percent of the savings.

Chairperson Nutter concluded by saying that no one likes change and as much as he would like to see it, I don't think it will happen this year

**Mr. Descoteaux made a motion to adjourn at 8:10 p.m.; seconded by Mr. Nutter. 6 yeas
APPROVED**

Respectfully submitted,



Billie Joe Turner, Interim Assistant
Superintendent for Finance for
Jeannine M. Durkin, Acting
Superintendent and Acting Secretary,
Lowell School Committee

BJT/mes